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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/526,568

03/04/2005

Jurgen Sans

NY-HUBR-1277-US

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EXAMINER

SACKEY, EBENEZER O

ART UNIT

PAPER NUMBER

1624

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/526,568	Applicant(s) SANS ET AL.	
	Examiner EBENEZER SACKEY	Art Unit 1624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-23 is/are pending in the application.
- 4a) Of the above claim(s) 17 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-16 and 19-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>03/04/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of the Claims

Claims 10-23 are pending.

Specification

The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Information Disclosure Statement

Receipt of the Information Disclosure Statement filed on 03/04/05 is acknowledged and has been entered into the file. A signed copy of the 1449 is attached herewith.

Response to Restriction

Applicant's election of Group I, claims 10-16 and 19-22 in the reply filed on 01/30/08 is acknowledged. Because applicant did not distinctly and specifically point

out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 10, 13, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Heywood et al., (U.S. Patent number 3,567,758).

Applicants claim a process for the catalyst-free preparation of cyano-phenols from methoxybenzonitriles, comprising reacting methoxybenzonitrile of formula (I) with an alkali metal alkoxide at a temperature of between 80⁰ and 230⁰ C.

Heywood et al., disclose the preparation of 4-hydroxybenzonitrile from a reaction between sodium-4-phenoxide and 4-methoxybenzonitrile at a temperature of between 160⁰ and 260⁰C. See Example 1, column 1 bridging column 2.

Claim Rejections - 35 U.S.C. § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 10-16 and 19-22 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Heywood et al., (U.S. Patent number 3,567,758). Applicants claim a process for the catalyst-free preparation of cyano-phenols from methoxybenzonitriles, comprising reacting methoxybenzonitrile of formula (I) with an alkali metal alkoxide at a temperature of between 80⁰ and 230⁰ C.

Determination of the scope and content of the prior art (MPEP §2141.01)

Heywood et al., teach the preparation of 4-hydroxybenzonitrile from a reaction between sodium-4-phenoxide and 4-methoxybenzonitrile at a temperature of between 160⁰ and 260⁰C. See the entire reference especially Example 1, column 1 bridging column 2. It is noted that current claims 11, 12 and 19 are drawn to the use of specific methoxybenzonitriles and alkali metal alkoxide respectively which are absent in the reference. However, the use of analogous reactants in a well-known process is *prima facie* obvious. Note claims 1, 13 and 20 are drawn to process temperatures which are inclusive of the broad temperature range of Heywood et al., (160⁰ to 260⁰C). Additionally, claims 14 and 21 are drawn to specific ratios of reactants which is absent from the reference. Note the broad use of “organic solvent” in Example III, which corresponds to current claim 15. Claim 16 is drawn to process parameter where the alkoxide component is initially charged in an alcohol and heated. This limitation is not taught by Heywood et al. However, the said limitation can hardly be considered as an inventive step, absent a showing of unexpected results. The same rational is applicable to use of an autoclave in claim 22.

Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)

Thus, the difference between the current invention and Heywood et al., reside in the use of specific methoxybenzonitrile and alkali metal alkoxide reactants. These differences are well-within the purview of the skilled artisan absent a showing of unexpected results. Hence, the claimed ratios, temperature and solvents are an obvious modification

available to the skilled artisan. These are merely optimization of variables, which are not patentable absent unexpected results due to these variables, and which difference may be a difference in kind, and not merely in degree from that of the prior art. See *In re Aller*, 105, USPQ 233 (1955) and *In re Boesch*, 205 USPQ 215 (1980).

Finding of prima facie obviousness---rational and motivation (MPEP §2142-2143)

Thus, at the time of filing this application, one of ordinary skill in the art would be motivated to substitute reactants embraced by the generic disclosure of Heywood et al., with a reasonable expectation that the substitution would not affect the outcome of the final product prepared by the process. Accordingly, the instantly claimed process would therefore have been suggested to one of ordinary skill in the art absent a showing of unexpected results and/or properties.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to E. Sackey whose telephone number is (571) 272-0704. The examiner can normally be reached on Monday-Friday from 7:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James O. Wilson, can be reached on (571) 272-0661. The fax phone number for this Group is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or may be directed to the Group receptionist whose telephone number is (571) 272-1600.

EOS

**/James O. Wilson/
Supervisory Patent Examiner, Art Unit 1624**

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